

Remarks

The November 12, 2008 Office Action for the instant application contains rejections of the pending claims on the basis of two references. The references are:

1) previously disclosed reference U.S. Patent 5,361,201 (hereinafter, Jost) which describes an invention for using a neural network model to: estimate property values and learn the relationship between property characteristics and the value of a property. The Jost disclosure mentions that regression models can be used to complete the property analyses, however, the Jost disclosure also describes several limitations of regression models that make them unsuitable for completing the disclosed property analysis. The Jost disclosure also describes an automated model development method that is only suitable for use with a neural network model. The Jost invention does use regression models to quantify an error range associated with property value estimates developed using non-causal neural network models. Jost provides additional evidence of the novelty, non-obviousness and newness of the claimed invention in a number of ways including:

a) Teaching away from the methods of the instant application by teaching the use of a single stage process for "learning" non causal relationships between property characteristics and value by reducing an error measure. By way of contrast, the innovative system of the present invention uses a multi stage process for identifying and quantifying causal relationships between independent variables and dependent variables by:

1. selecting the independent variables that produce the most significant increases in a model relevance measure,
2. refining the selection to include only causal variables by element, and
3. using the element variables as inputs to a plurality of models and selecting the regression model with the lowest error to quantify the causal relationship(s) between elements and dependent variables.

b) Teaching away from the methods of the instant application by teaching the development and use of a single, non-causal model for estimating a value and identifying the factors that correlate to that value. By way of contrast, the innovative system of the present invention uses the models it develops using a multi-stage process for identifying the factors that are causal to an observed value identified using another means.

c) Teaching away from the methods of the instant application by teaching a complete reliance on a single, unstable neural network model for all model development. By way of contrast, the

innovative system described in the instant application relies on a plurality of models for every stage of processing

d) Teaching away from the methods of the instant application by teaching a complete reliance on variable weight adjustment for all model development. By way of contrast, the innovative method and system described in the instant application does not require variable weight adjustment for any of the results at any stage of processing.

2) previously disclosed reference U.S. Patent 5,812,988 (hereinafter, Sandretto) which discloses an invention for back-fitting a value for a portfolio of assets to a known portfolio value by iterating the value of an input variable, the discount rate, for each item in the portfolio. Sandretto provides additional evidence of the novelty, non-obviousness and newness of the claimed invention in a number of ways including:

a) Teaching away from the methods of the instant application by teaching the use of a single stage modeling technique for back-fitting the value of a plurality of individual assets to an overall portfolio value. By way of contrast, the innovative system of the present invention uses a multi stage process that models and quantifies causal relationships between independent variables and dependent variables by:

1. selecting the independent variables that produce the most significant increases in a model relevance measure,
2. refining the selection to include only causal variables by element, and
3. using the element variables as inputs to a plurality of models and selecting the regression model with the lowest error to quantify the causal relationship(s) between elements and dependent variables.

b) Teaching away from the methods of the instant application (and most Asset Trust applications) by teaching the identification of an item value. By way of contrast, the innovative system of the present invention (and most Asset Trust applications) teaches the identification of a causal relationship between a model of one or more independent elements and an observed value for another, related entity.

c) Teaching away from the methods of the instant application (and all Asset Trust applications) by teaching the use of input variable adjustments that reduce an overall error measure as part of model development. By way of contrast, the innovative system of the present invention (and all Asset Trust applications) teaches a model development method that does not adjust the value of a single input variable.

The above discussion also provides substantial evidence that the references were selected because they contained a few words that were the same as those in the claims and not because the provided evidence of obviousness. Taken as a whole, the two references provide substantial additional evidence of the novelty, non-obviousness and newness of the claimed invention by teaching away from all the claimed methods. These differences are summarized in the table below:

Teaching	10/743,417	Jost	Sandretto
Analysis level	Element	Item	Item
Model type	Causal predictive	Non-causal, neural network	Non causal, discounted cash flow
First model stage	<u>Select input variables</u> using stepwise regression	Reduce an error measure <u>by adjusting weights</u> for different characteristics in a value model	Reduce an error measure <u>by adjusting an input parameter</u> value at the item level in a value model
Second model stage	Identify the best set causal input variables using induction and objective criteria	None	None
Third model stage	Use the best set of variables in a plurality of models and <u>select the model with lowest error</u>	None	None

The selection of the two references described above also provides substantial evidence that those authoring the November 12, 2008 Office Action for the instant application lack the level of skill in the art required to author a rejection for obviousness, lack of utility and/or for an alleged written description deficiency. The latter statement was made because it is well established that the “hypothetical ‘person having ordinary skill in the art’ to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art.” Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). No one who understood the scientific and engineering principles applicable to the pertinent art would ever suggest:

- 1) the use of an invention (Sandretto) that completely relies on the adjustment of an input variable to identify relationships between items in a portfolio and a portfolio value in an

attempt to render obvious an invention that develops a causal models without relying on the adjustment of a single input variable,

2) the use of an invention (Jost) that completely relies on the adjustment of variable weights to produce a non-causal model as part of an attempt to render obvious an invention that can develop causal models without relying on the adjustment of a single variable weight, and/or

3) the use of two inventions with single stage, item level models in an attempt to render obvious an invention that teaches and relies on a three stage, element level model.

A review of other Office Actions authored by the Examiner(s) for the instant application shows that they provide additional evidence that the Examiner(s) does/do not appear to understand any of the scientific and/or engineering principles applicable to the pertinent art (see Appendix).

35 U.S.C. §101 rejections

In the 12 November 2008 Office Action claims 125 - 150 are rejected under 35 USC §101 for allegedly not having a specific utility. The Assignee traverses the claim rejections by noting that the evidence required to support the prima facie case that would sustain the claim rejections has not been provided. MPEP 2164.07 states "the examiner has the initial burden of challenging an asserted utility. Only after the examiner has provided evidence showing that one of ordinary skill in the art would reasonably doubt the asserted utility does the burden shift to the applicant to provide rebuttal evidence sufficient to convince one of ordinary skill in the art of the invention's asserted utility. In re Brana, 51 F.3d 1560, 1566, 34 USPQ2d 1436, 1441 (Fed. Cir. 1995) (citing In re Bundy, 642 F.2d 430, 433, 209 USPQ 48, 51 (CCPA 1981)). Given the complete absence of evidence to support these assertions, the Assignee submits that the Examiner has failed to establish the required prima facie cause that the rejected claims lack utility.

The second reason claims 125 – 150 are patentable is that the assertions regarding the alleged lack of utility of the rejected claims are not in compliance with the requirements of the Administrative Procedures Act and are therefore moot. In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of USPTO findings are the standards set forth in the Administrative Procedure Act ("APA") at 5

U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. The Appellant submits that discussion in the preceding paragraphs clearly shows that the instant Office Action fails to provide even a scintilla of evidence to support the allegation that the claims lack utility and that as a result it fails to meet the substantial evidence standard. The Appellant submits that the rejection for lack of utility of claims 125- 150 also fails to pass the arbitrary and capricious test because:

- a) the U.S.P.T.O fact-finding has provided other references, Sandretto and Jost, that indicates there is an understanding that the output from the claimed invention has utility in the analysis and management of real world entities,
- b) the specification discloses a number of useful applications of the models and their output, and
- c) the U.S.P.T.O. recently issued a patent to a large company for completing similar tasks in a similar manner (7,283,982).

The third reason claims 125 – 150 are patentable is that the claim rejections are non-statutory. The claim rejections are non-statutory because there is no statutory basis for giving any consideration to a lack of utility rejection authored by individuals with a level of skill in the art that is not average or better.

35 U.S.C. §103 rejections

In the 12 November 2008 Office Action claims 125 - 150 are rejected under 35 U.S.C. §103(a) as being obvious given U.S. Patent 5,812,988 (hereinafter, Sandretto) in view of U.S. Patent 5,361,201 (hereinafter Jost). The Examiner has cited Sandretto and Jost as references. The Assignee traverses the rejections for obviousness in a number of ways. First, by noting that the claim rejections are not in compliance with the Administrative Procedures Act and are therefore moot. Second, by noting that the Office Action has failed to establish a prima facie case of obviousness. Third, by noting the claim rejections are non-statutory. The claim rejections are non-statutory because there is no statutory basis for giving any consideration to an obviousness rejection authored by individuals with a level of skill in the art that is not average or better.

In particular, the 12 November 2008 Office Action fails to establish a prima facie case of obviousness for claims 125 – 150 by: citing combinations of documents that teach away from the claimed invention as discussed on pages 8 through 11 of this paper, citing a combination of

documents that fails to teach one or more limitation for every claim as discussed on pages 8 through 11 of this paper, failing to explain the combination as required by *KSR v Teleflex*, teaching a combination that requires a change in principle of operation of the disclosed inventions and teaching a combination that would destroy the ability of one or more of the inventions to function. *MPEP 2143.03 provides that: to establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art (In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).*

35 U.S.C. § 112 First Paragraph Rejections

In the 12 November 2008 Office Action the Examiner has rejected claims 125 - 150 under 35 U.S.C. §112 first paragraph as lacking a written description that would enable those of average skill in the art to make and use the claimed invention. Specifically, the Examiner has made an unsupported statement that the specification requires subjective judgments and lack a clear set of steps that allegedly would make it difficult to implement the invention.

The Assignee traverses the §112 first paragraph rejection of claims 125 - 150 in three ways. First, by noting that the Office Action has failed to establish a prima facie case that the specification does not meet the requirements of §112 first paragraph. Second, by noting that the assertions regarding the alleged lack of written description are not in compliance with the both standards of the Administrative Procedures Act and are therefore moot. Third by noting these claim rejections are non-statutory. The claim rejections are non-statutory because there is no statutory basis for giving any consideration to a written description rejection authored by individuals and/or an organization with a level of skill in the art that is not average or better.

As mentioned previously, the Examiner has failed to establish a prima facie case that the specification does not meet the requirements of §112 first paragraph. MPEP 2163 states that: *"A description as filed is presumed to be adequate, unless or until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption. See, e.g., In re Marzocchi, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). The examiner, therefore, must have a reasonable basis to challenge the adequacy of the written description. The examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. Wertheim, 541 F.2d at 263, 191 USPQ at 97. In rejecting a claim, the*

examiner must set forth express findings of fact regarding the above analysis which support the lack of written description conclusion. These findings should:

(A) Identify the claim limitation at issue; and

(B) Establish a prima facie case by providing reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed. A general allegation of "unpredictability in the art" is not a sufficient reason to support a rejection for lack of adequate written description."

The arguments presented by the Examiner fail to establish the prima facie case required to sustain a §112 first paragraph rejection for a single claim in at least three ways:

1. the first way the 12 November 2008 Office Action fails to establish the prima facie case that the specification does not meet the requirements of §112 first paragraph is that the Examiner has not identified any reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed;
2. the second way the 12 November 2008 Office Action fails to establish the prima facie case that the specification does not meet the requirements of §112 first paragraph is that the Examiner has only made general allegations; and
3. the third way the 12 November 2008 Office Action fails to establish a prima facie case that the specification does not meet the requirements of §112 first paragraph is that the Examiner has not identified the claim limitation(s) at issue.

The Assignee submits that the assertion that the specification does not meet the requirements of §112 first paragraph also fail under both standards of the APA. First, as detailed above, the Examiner has not provided any evidence to support these allegations. As a result, the §112 first paragraph rejection of claims 125 - 150 fails under the substantial evidence standard. It is well established that conclusory statements do not constitute evidence. Furthermore, the statements supporting the claim rejections were not specific and they were made by an Examiner and an organization with a thoroughly documented lack of the skill in the relevant arts required to author a valid written description rejection. A comparison of the method disclosed in the instant application with the method contained in a recently issued patent shows that the rejections also fail under the arbitrary and capricious standard.

Summary of 10/743,417	Summary of 7,283,982 filed in 2003
1. Transform raw data into indicators using pre-programmed functions and Linus/AQ algorithms	1. Use <u>any</u> technique to derive a basic model
2. Develop an initial model using the raw and transformed data as inputs by: <ul style="list-style-type: none"> a) creating parallel models using different specified algorithms, b) using stepwise regression to identify the best set of input variables for the models for each algorithm type 	2. Develop an initial model by: <ul style="list-style-type: none"> a) deriving features from the input to the basic model using <u>any</u> current transform regression algorithm, and b) using stepwise regression to select the input features for the initial regression model
3. Refine the variable selection from 2b) and then transform the resulting set of input variables into summaries using different specified algorithms. Select the best summary using a cross validation algorithm	3. Complete a non-linear transformation of an explanatory input feature(s) from the initial model.
	4. Use the transformed input features to create a new linear regression model
4. Use the summary of transformed data from 3 to create a plurality of models. Select the best model using a mean squared error algorithm.	5. Combine the output of the new linear regression model with the output of the initial model and use the sum to provide a final model for the current iteration
	6. Repeat steps 3 through 5 indefinitely

This is because instant application has no identifiable subjectivity in model development while considerable subjectivity appears to be present in a recently issued patent for completing similar tasks. As shown above, both the instant application and issued patent methods rely on stepwise regression for the input variable selection step. The use of stepwise regression for variable selection and the development of summaries from the selected variables has been judged to be obvious (see 103 rejection discussion) and too subjective in the instant application and in related applications that develop models (it was equated with the use of fear and emotion in an Office Action for application 09/688,983) while the issued patents reliance on the exact same technique was judged to be novel and concrete when used in model development.

Furthermore, the written description for the issued patent (7,283,982) appears:

- a) to be missing a critical step that can render the claimed method unstable and unusable, and

- b) to be more subjective than the written description for the Asset Reliance application because: one step in the issued patent method calls for the use of “any” model, another step in the issued patent method calls for the use of “any” current transform regression algorithm, and the number of iterations is not specified. By way of contrast, the instant application specifically identifies specific algorithms and does not use an open ended model development process.

Further evidence of the arbitrary and capricious nature of the claim rejections can be found by examining prior U.S.P.T.O. fact findings that have thoroughly documented the Examiner's and the organization's apparent inability to understand the scientific and/or engineering principles applicable to the pertinent art (see Appendix). While no rebuttal is required, the Assignee also notes that a declaration has been provided which also could be used to provide a complete rebuttal of the unsubstantiated rejections contained in the 12 November 2008 Office Action for a lack of written description. The declaration memorializes the only known independent review of the instant application by an individual with the level of skill in the art required to author a valid opinion regarding the written description.

Rather than providing evidence that would support claim rejections, the 35 U.S.C. §112 first paragraph rejections in the 12 November 2008 Office Action provide additional evidence that the Examiner(s) signing the Office Action (and their organization) do not understand the scientific and/or engineering principles applicable to the pertinent art. As detailed in the specification, most of the data used in developing models is identified automatically as it is raw data from identified databases, database data that has been transformed by a LINUS algorithm or data that has been transformed using pre-programmed functions (i.e. for expected value drivers). The user is asked to provide input that specifies the data sources and does have the ability to input some data (such as keywords). The data structure and data input are tested and required corrections (if any) are made using the steps detailed in the specification. As detailed in the specification, the variables used in a completed model are first selected by a stepwise regression algorithm. These variable selections are refined by induction algorithms and the best set of variables from the induction algorithm analysis step are then selected using the objective criteria detailed in the specification. The final step involves using the output from the induction step to develop a plurality of models before selecting the best model with a mean squared error algorithm. No one who understood the scientific and/or engineering principles applicable to the pertinent art would ever suggest that a process that relies on stepwise regression and induction

for variable selection from a validated set of data and the mean squared error algorithm to select a final model was subjective.

35 U.S.C. § 112 Second Paragraph Rejections

In the 12 November 2008 Office Action the Examiner has rejected claims 125 - 150 under 35 U.S.C. §112 first paragraph as lacking a written description that would enable those of average skill in the art to make and use the claimed invention.

The Assignee traverses the §112 second paragraph rejection of claims 125 - 150 in three ways. First, by noting that the Office Action has failed to establish a prima facie case that the specification does not meet the requirements of §112 second paragraph. Second, by noting that the assertions regarding the alleged lack of written description are not in compliance with the both standards of the Administrative Procedures Act and are therefore moot. Third by noting the rejections are non-statutory. The claim rejections are non-statutory because there is no statutory basis for giving any consideration to a written description rejection authored by individuals and/or an organization with a level of skill in the art that is not average or better.

As mentioned previously, the first way the Assignee will traverse the 35 U.S.C. §112 second paragraph rejection of claims 125 - 150 will be by noting that the arguments presented by the Examiner fail to establish the prima facie case required to sustain a §112 second paragraph rejection. *MPEP 2173.02 states that: definiteness of claim language must be analyzed, not in a vacuum, but in light of:*

(A) The content of the particular application disclosure;

(B) The teachings of the prior art; and

(C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. In reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent. See, e.g., Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 1379, 55 USPQ2d 1279, 1283 (Fed. Cir. 2000). See also In re Larsen, No. 01-1092 (Fed. Cir. May 9, 2001). In the case of claims 125 - 150 the Examiner has failed to establish the prima facie case that the specification does not meet the requirements of §112 second paragraph in at least four ways for every rejected claim. The four ways are:

1. by failing to interpret the claims in light of the specification,
2. by failing to provide any evidence that someone of average skill in the relevant arts would have difficulty interpreting the claims,
3. by failing to establish that the limitation(s) in the claims fail to describe the invention and/or
4. by failing to consider the claim as a whole.

These failures may be due to the fact that those authoring the Office Action do not appear to understand any of the scientific and/or engineering principles applicable to the pertinent art. The detail cited under the discussion of the §112 first paragraph rejection discussion of failure to comply with the APA also supports the arguments regarding the APA under this section.

Request for Correction

In accordance with the relevant statutes and precedents the Assignee is entitled to expect and receive: an unbiased patent application examination conducted by an Examiner with knowledge of the relevant arts who follows the law. To date, the activity associated with the instant patent application bears no resemblance to the patent application examination standards dictated by statute and precedent. Among other things this has resulted in the allowance and issue of dozens of apparently invalid patents. Prompt correction is requested.

Statement under 37 CFR 1.111

37 CFR 1.111 requires that the basis for amendments to the claims be pointed out after consideration of the references cited or the objections made. The Assignee notes that this requirement is not relevant to the instant application because, as detailed above, there are no references or objections to avoid. Having said that, the Assignee notes that the primary reasons the prior set of claims were amended to put the claims in final form for allowance and issue.

Reservation of rights

The Assignee hereby explicitly reserves the right to present the previously modified and/or canceled claims for re-examination in their original format. The cancellation or modification of pending claims to put the instant application in a final form for allowance and issue is not to be construed as a surrender of subject matters covered by the original claims before their cancellation or modification.

Conclusion

A valid patent application rejection requires substantial evidence (see Comiskey & Gartside). The November 12, 2008 Office Action does not contain any evidence that would support the rejection of a single claim. However, the November 12, 2008 Office Action for the instant application does provide substantial evidence that:

- a) those authoring/signing the Office Action do not appear to understand any of the scientific and/or engineering principles applicable to the pertinent art,
- b) those authoring the Office Action do not adhere to any of the well established statutory requirements for authoring valid claim rejections, and
- c) those authoring the Office Action appear to have based the claim rejections on the use of different standards than those used for the review of similar applications filed by larger companies.

The pending claims are of a form and scope for allowance. Prompt notification thereof is requested.

Respectfully submitted,

Asset Trust, Inc.

/B.J. Bennett/

B.J. Bennett, President

Date: February 12, 2009

APPENDIX

(material from other co-pending applications has been provided and is being provided in accordance with the provisions of MPEP § 2001.06(b))

A review of other Office Actions authored by the Examiner(s) for the instant application provides substantial additional evidence that the Examiner(s) does/do not appear to understand any of the scientific and/or engineering principles applicable to the pertinent art.

09/761,670 - In Office Actions and an Examiner's Answer for 09/761,670 the Examiner has attempted to use the same combination of reference documents listed above (Sandretto and Jost) to render obvious an invention that uses genetic algorithms that evolve independent subpopulations in order to optimize neural network models that identify the relationship of a plurality of elements of value to one or more aspects of financial performance. The Examiner also offered the opinion that the neural network model development method disclosed therein was subjective and unstable and that claims containing language that mirrors the mathematical definition of a network are indefinite. No one who understood the scientific and engineering principles applicable to the pertinent art for 09/761,670 would ever suggest:

1. the use of an invention (Sandretto) that adjusts discount rates in an attempt to render obvious an invention that teaches an relies on a the use of a single discount rate (the cost of capital) for all calculations;
2. the use of an invention (Jost) that adjusts item weights to produce a neural network model in an attempt to render obvious an invention that uses genetic algorithms to identify variables that produce the most significant increases in a fitness measure, summarizes the identified variables by element and then train a neural network model created with the best summaries,
3. the use of a combination of two inventions (Jost and Sandretto) with single stage, item level models in an attempt to render obvious an invention that teaches and relies on a three stage, element level model development method,
4. the use of an invention (Sandretto) that adjusts input variable values to back-fit the value of a plurality of items to a known portfolio value in an attempt to render obvious an invention that does not adjust input variable values during any stage of processing,
5. that the neural network model development method of 09/761,670 was unstable. The method of 09/761,670 has been recognized by independent research scientists as being the most stable neural network model development method (see Yang Bo reference). The U.S.P.T.O. has issued over 3,600 apparently invalid patents that rely

on neural networks developed using less stable methods than those detailed in 09/761,670,

6. that the use of weights from a neural network model developed using the most stable known development method (as discussed in item 5) to quantify relationship strength was subjective, and/or
7. that claims that mirror the formal definition of a network were indefinite.

10/750,792 - In Office Actions for 10/750,792 the Examiner has attempted to use Sandretto together with U.S. Patent 6,012,053 (hereinafter, Pant) in an attempt to render obvious an invention that uses the same model development method described in the instant application to develop and output word relevance measures that have utility in search applications. Pant teaches a relevance determination method that involves

1. receiving a set of search results from a query where each search result has a plurality of attributes,
2. receiving input from a user that identifies the relevance factors and factor weightings that will be used to evaluate the attributes of the search results,
3. assigning a weight to identified attributes in each of the search results supplied in step 1 based on the relevance factors supplied in step 2,
4. summing the weights and outputting a score for each of the items in the search query based on the results from step 3, and
5. sorting the set of search results from step 1 in an order that is based on the score of each item.

No one who understood the scientific and engineering principles applicable to the pertinent art for 10/750,792 would ever suggest:

- 1) the use of an invention (Sandretto) that completely relies on the adjustment of an input variable to identify relationships between items in a portfolio and a portfolio value in an attempt to render obvious an invention that develops and outputs keyword relevance measures without relying on the adjustment of a single input variable,
- 2) the use of an invention (Pant) that identifies the relevance of a web page or document on the basis of subjective, user-supplied relevance factors and weightings in an attempt to render obvious an invention that identifies the relevance of keywords on the basis of a quantified financial impact,

3) the use of two inventions (Sandretto and Pant) that would both be required to change their principle of operation to render obvious the claimed invention. Sandretto would have to change from the adjustment of a single input variable as required to reduce an error measure to variable selection based on enhanced relevance and causality and Pant would have to change from developing and using a measure based on user-supplied factors and weightings to developing and using a measure based on quantified changes in a financial measure, and/or

4) the use of an invention (Sandretto) that teaches there is only one way to change value, change the value of cash flow, in an attempt to render obvious an invention that teaches and relies on the fact that there are at least four ways to change value: change the value of cash flow, change the value of the elements of value, change the value of growth options and change the value of market sentiment. A comparison of these teachings is summarized in the table below:

Value change per 10/750,792	Value change per Sandretto
1. Change value of cash flow, 2. Change value of elements of value, 3. Change value of growth options & 4. Change value of market sentiment	1. Change value of cash flow

11/278,419 – In an Office Action for 11/278,419 the same Examiner and Primary Examiner have attempted to use Sandretto together with U.S. Patent Application 2002/0198811 (hereinafter Wizon) and U.S. Patent Application 2006/0059064 (hereinafter Glinberg) in an attempt to render obvious an invention that uses a model development method similar to the one described in the instant application to develop models of financial performance and then use those models to support the simulation, measurement and optimization of value and risk by segment of value, element of value and external factor under a plurality of scenarios. The risk analysis method Wizon teaches for individual assets is the risk analysis technique associated with the previously disclosed Capital Asset Pricing Model (CAPM) and the risk analysis method Wizon teaches for groups of assets is the previously disclosed VaR metric. Glinberg teaches a system for efficiently using collateral for risk offset when portfolio risk is analyzed using the previously disclosed Standard Portfolio Analysis of Risk system (hereinafter the SPAN system) the Theoretical Intermarket System (hereinafter, TIMS) and/or the OMS II system. SPAN, TIMS and OMSII analyze risk on the basis of price changes without identifying or analyzing the source(s) of risk using standard scenario assumptions

that are not related to the actual or expected variability associated with the actual sources of risk and/or the actual portfolio being analyzed. No one who understood the scientific and engineering principles applicable to the pertinent art for 11/278,419 would ever suggest:

- 1) the use of an invention (Sandretto) that completely relies on the adjustment of an input variable to identify relationships between items in a portfolio and a portfolio value in an attempt to render obvious an invention that develops and outputs organization finance models without relying on the adjustment of a single input variable,
- 2) the use of an invention (Wizon) that relies on a Capital Asset Pricing Model method in an attempt to render obvious an invention that measures and optimizes risk by completing simulations that rely on information created by a method similar to the method disclosed herein,
- 3) the use of an invention (Wizon) that relies on Value at Risk metrics in an attempt to render obvious an invention that measures and optimizes risk by completing simulations that rely on information developed a model created by a method similar to the method disclosed herein, and/or
- 4) the use of an invention (Glinberg) that uses SPAN, TMS and OMSII to analyze risk on the basis of price changes without identifying or analyzing the source(s) of risk that are not related to the actual or expected variability associated with the actual sources of risk and/or the actual portfolio being analyzed in an attempt to render obvious an invention that measures and optimizes risk by completing simulations that rely on information developed a model created by a method similar to the method disclosed herein.

Summarizing the information detailed above, the prior fact-findings by the U.S.P.T.O. have provided substantial evidence that one or more those authoring/signing the above referenced Office Actions do not understand the scientific and engineering principles applicable to:

- a) value analysis, measurement and optimization;
- b) risk analysis, measurement and optimization;
- c) mathematical model development and optimization,
- d) neural network model development and optimization; and/or
- e) networks and genetic algorithms.